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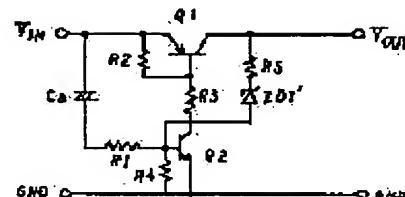
(21)Application number : 06-005739 (71)Applicant : SHARP CORP  
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## (54) LOW-VOLTAGE SENSITIVE CIRCUIT BREAKER AND SEQUENTIAL CIRCUIT

### (57)Abstract:

PURPOSE: To provide a circuit breaker operable on low input voltage, which cuts off its output transistor to prevent overheating if its output terminals are short-circuited.

CONSTITUTION: A charging capacitor C3 is inserted between the base of a transistor for cut-off Q1 and an input terminal Vin and a Zener diode ZD1' is so inserted between the base of the transistor for cut-off Q1 and an output terminal Vout that the anode of the Zener diode ZD1' may be connected to the base of the transistor for cut-off. The capacitor C3 installed at the input side is charged only at the time of start-up to drive a transistor for driving Q2 and the transistor for cut-off Q1 and does not operate afterwards. After the start-up, the Zener diode ZD installed at the output side detects the voltage reduction of the input voltage and the short of the output terminal and cuts off the output transistor. When the voltage reduction of the input voltage and the short of the output terminal are detected, the transistor for cut-off is surely turned OFF and output is stopped and therefore the transistor for cut-off does not generate heat as in the conventional method.



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